

Researchers find re-wetting of peat bogs does not restore them to their natural state very quickly

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A large team of researchers affiliated with institutions in Germany, The Netherlands, Poland, Belgium and Denmark has found that re-wetting peat bogs does not restore them to their natural state very quickly. In their paper published in the journal *Nature Communications*, the group

describes their comparison of hundreds of re-wetted peat bogs in several parts of Europe with relatively undisturbed peat bogs under similar environmental conditions and what they found.

Earlier this year, the UN launched what it calls, the UN Decade for the Restoration of Ecosystems—a program aimed at helping countries fulfill their obligations under the Paris Climate Agreement. The idea behind the new program, as its name implies, is to restore as much land as is possible to its natural state.

It is believed that doing so will allow for more natural [carbon](#) capture by the plants that grow in the restored areas. One such type of area that received special attention were peat bogs—such bogs hold approximately twice as much carbon as the world's forests. Peat bogs are [land areas](#) that are covered with [peat](#), which is partially decayed [organic matter](#)—they tend to be soggy for much of the year and they currently cover approximately 3.7 million square miles of natural surface area. In this new effort, the researchers wondered if simply re-wetting areas that were once [peat bogs](#) would return them to their prior state—and if so, how long it might take.

To find out, they conducted an [extensive study](#) of 320 re-wetted bogs in sites across Europe and compared what they found in them with 243 near-natural bogs. In looking at their comparison data, they found that the plant communities in re-wetted bogs differed markedly from those in the near-natural bogs—they also had more variable water tables and had less organic material in them.

The researchers also noted that the amount of time since the bogs had been re-wetted made little difference in their makeup—all of the re-wetted bogs were virtually the same. They suggest that more research needs to be done to determine if re-wetting efforts are having the desired effect, namely, storing more carbon than they did before re-wetting.

More information: J. Kreyling et al, Rewetting does not return drained fen peatlands to their old selves, *Nature Communications* (2021). DOI: [10.1038/s41467-021-25619-y](https://doi.org/10.1038/s41467-021-25619-y)

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